

*Thickness.*—The thickness of the St. Marys formation is exceedingly variable, due to the fact that it occupies depressions in an old land surface and also to the fact that it has suffered much erosion since its deposition. In certain places it may be 20 to 30 feet thick, while at a distance of no more than a quarter of a mile it may be absent altogether. Its greatest thickness is undoubtedly found in the northern part of the State, particularly along Meherrin and Chowan rivers. At Edenton material which probably consists mainly of St. Marys strata was found, in a well section, to extend from 10 to 230 feet. The upper part of this certainly belongs to the Yorktown formation, though probably most of it is older. From all the evidence which we have at hand at present it seems that the St. Marys formation of North Carolina is approximately 150 feet thick in its maximum development, which it attains in Hertford, Bertie, and Chowan counties, and gradually thins to a feather edge to the west and southwest, though it is about 45 feet thick at Wilson.

The lists of fossils that are given in connection with the detailed stratigraphic sections on later pages show the wide range of species found in the deposits of this formation. The marl beds previously mentioned have furnished a great abundance of well-preserved fossils, though they have not as yet been exhaustively studied. The fossils belong mainly to the group of the *Mollusca*, and of the group the *Pelecypods* are present in greatest numbers. The great abundance of *Mulinia congesta* is especially noticeable, and scarcely ever do we find an exposure of the St. Marys without finding almost as many specimens of this small *Pelecypod* as all other species combined. In certain places the marl seems to be almost entirely composed of this form. While it is not confined to the St. Marys formation, yet its remarkable development in strata of this age is diagnostic. Beside molluscan remains, much coral is found in certain localities and the remains of many marine vertebrates occur throughout the beds. Larger vertebræ of marine mammals are found in many places, while several almost complete skeletons have been reported to occur in various sections of the State. Sharks' teeth are found in many different localities, though they are not known to occur in as great abundance in this formation at any place as they do in the Castle Hayne formation in the vicinity of Wilmington.

The St. Marys formation in North Carolina forms a rather broad band extending from the North Carolina line southward to the Neuse River. Its limits westward occur along a line passing near Weldon, Halifax, Enfield, Whitakers, Rocky Mount, Wilson, and Goldsboro,